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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Oliver J. Murphy

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/828,507	Applicant(s) MURPHY ET AL.	
	Examiner JULIAN MERCADO	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 56-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed December 22, 2009.

This Office action is made NON-FINAL in view of a new ground of rejection.

Claims 1-55 are pending for consideration.

Claim Rejections - 35 USC § 112

The rejection of claims 8, 11 and 13-55 under 35 U.S.C. 112, second paragraph has been withdrawn. The examiner notes applicant's assertion that the term "dry" in claims 8, 12, 13, 19, 20, 21, 40 and 43, otherwise a relative term, is defined in the specification as "neither solvated nor hydrated." (remarks on page 12)

Claim Rejections - 35 USC § 102

The rejection of claims 1, 2, 4-13, 16-24, 27-32 and 39-45 under 35 U.S.C. 102(b) based Gonzalez-Martin et al. (U.S. Pat. 6,149,810) has been withdrawn. The examiner concedes with applicant's assertion that the membrane in Gonzalez-Martin et al. is converted to the proton form for use.

(new rejection)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-13, 16-24, 27-32 and 39-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Plowman et al. (U.S. Pat. 5,654,109).

Plowman et al. teaches providing a membrane and electrode assembly with an electrocatalyst in intimate contact with a cation exchange membrane. See col. 3 line 51 et seq.. This membrane is in an alkali metal cation form, "[t]he pendant group is then in the -SO₃-Na⁺ form...." Not that other cations other than -Na⁺ such as K⁺ may be used and that a conversion from the sulfonic fluoride form to the alkali metal cation (e.g. Na⁺ or K⁺) is disclosed. See col. 8 line 6 et seq. This form is during a period without an electrical current passing through the membrane and electrode assembly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(new rejection)

Claims 3, 14, 15, 25 and 26 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Plowman et al. (U.S. Pat. 5,654,109).

As to the electrocatalytic activity diminishing, as the membrane and electrode assembly provided for by Plowman et al. is identical to that disclosed and claimed by applicant for the

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reasons discussed under the 35 U.S.C. 102(b) rejection above, it would naturally flow to have, inherently, the same diminishing electrocatalytic activity as claimed, absent of a showing by applicant that the claimed invention distinguishes over the reference. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990)

(new rejection)

Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plowman et al. (U.S. Pat. 5,654,109).

As to the hydroxide concentration and its duration of contact, absent of unexpected results it is asserted that these are optimizable parameters for result-effective variables, insofar as directly affecting the conversion of the perfluorinated sulfonic acid from its proton form. See col. 8 line 15 et seq. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)

(new rejection)

Claims 46-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plowman et al. (U.S. Pat. 6,149,810) in view of White (U.S. Pat. 4,311,567).

The teachings of Plowman et al. are discussed above.

For claim 46, Plowman et al. do not explicitly teach passing electrical current through the membrane and subsequently removing this potential. However, White teaches applying a potential of 2.4 to 2.6 volts for a predetermined period of time in the fabrication of a permionic membrane. See col. 6 line 1 et seq. The skilled artisan would find obvious to modify Plowman et al. by passing a potential through the membrane of and electrode assembly. The motivation

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for such a modification is to reduce the electroresistivity of the membrane. See col. 6 line 46 et seq. and col. 7 line 10 et seq.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/Julian Mercado/
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795

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